

# White Paper Report

Report ID: 107266

Application Number: PF-50322-12

Project Director: Sara Jane (Sally) Elk (sje@easternstate.org)

Institution: Eastern State Penitentiary Historic Site, Inc.

Reporting Period: 10/1/2012-12/31/2014

Report Due: 3/31/2015

Date Submitted: 5/7/2015

# **Advanced Planning for a Sustainable Collections Storage Facility within a Semi-Ruined Historic Prison**

Grant Number: PF-50322-12

Project Title: Schematic Planning for the Box Factory (Long-Term Collections Storage)

Project Director: Sara Jane Elk, President and CEO

Grantee: Eastern State Penitentiary Historic Site, Inc.

Report Submission Date: March 31, 2015



## **Project Summary**

A schematic design document produced with the support of a Sustaining Cultural Heritage Collections grant from the National Endowment for Humanities (NEH) advanced Eastern State Penitentiary Historic Site's (ESPHS) planning for long-term collections storage. This project built on the success of a preceding grant from the Institute of Museum and Library Services (IMLS) that had funded the study of several historic structures on the penitentiary's property for their potential reuse as collections storage facilities and recommended the best candidate to develop for that purpose. The NEH-funded schematic design document made clear to, ESPHS the opportunities for an energy efficient conservation environment presented by the selected location and the scope of work and estimated cost to convert the former workshop space (the Box Factory) into a museum-quality storage and study space.

## **Project Description**

The 2013 *Environmental Management Plan for Stored Collections* resulting from the IMLS study advocated for the conversion of the former Box Factory space using a “box within a box” approach. See Appendix I for photographs of the conservation conditions of this workshop. This model essentially constructs a pest and weather-tight structure within the Box Factory's walls, thereby creating a new energy efficient enclosure while preserving the historic fabric of the outer building. The new structure would be divided into sections to provide different environments needed for ESPHS' diverse collections. To briefly recap, one collection, the “Abandoned Collection,” consists of over 1,000 artifacts (not including over 2,500 items remaining in situ throughout the site) and approximately 26 linear feet of documents left behind when the penitentiary was abandoned in 1971 and has suffered the effects of the raw semi-ruined conditions. The other collection, the “New Collection,” consists of approximately 300 artifacts and over 55 linear feet of documents donated to or purchased by ESPHS after the site became a museum in 1994. Although this collection has benefitted from a higher level of collections care, ESPHS will soon run out of storage space for it.

The *Environmental Management Plan* presented its recommendations in descriptive and graphical form, setting out the necessary scope of work and identifying any future design issues to be resolved. The NEH grant allowed ESPHS to take the planning to the next level. This white paper describes the activities and accomplishments of the same core team of architects, engineers, and museum environmental consultants that conducted the earlier study. The team focused on the details required to realize the recommended storage solution and brought in additional expertise to provide more fully developed cost estimates. The team worked closely with ESPHS staff and representatives of the Board of Directors over the summer and fall of 2014 and ultimately produced the *Collections Care Facility – Schematic Design* document (see Appendix II). This design document includes specific architectural plans, sections, key details, an updated specification narrative, and a definitive professional cost estimate as well as a supporting visual that ESPHS will use as it seeks funding for creating the new storage facility.

## **Project Activities**

Atkin Olshin Schade (AOS) Architects led the team of consultants, which included Watson & Henry Associates as the museum environmental consultant, and Brian Howard, a collections conservation consultant. All three had worked together on the preceding collections storage assessment funded by the IMLS grant. The architects led the team for this phase of planning since the scope of work was primarily focused on design issues. They brought in additional consultants for building systems engineering and cost estimating and facilitated three meetings over the course of the project. The first two meetings included the core consultant team and ESPHS staff. They reviewed design details and provided feedback to resolve questions. The third meeting included two ESPHS Board Directors who serve on the Collections Committee to review the advanced schematics and approve final changes.

AOS and the project team carried out the major steps they had projected going into this planning project. These included:

- Developing detailed schematic floor plans, building sections, exterior and interior building elevations, furniture plans, and wall sections showing how the “box within a box” concept would be integrated into the historic building envelope.
- Developing the performance criteria for mechanical and electrical systems and making preliminary selections for equipment, keeping in mind ESPHS’ need for environmental control solutions that would be physically and financially sustainable over the long-term.
- Identifying provisions for blocking light and reducing water risk from the restored historic skylights and for roof drainage.
- Providing a more detailed quantification of the scope of work necessary to prepare the storage area.
- Procuring a cost estimate.
- Producing a perspective drawing that will help Eastern State build awareness and excitement among prospective funders.

The inclusion of a collections care/research space was one issue that ESPHS did not anticipate at the beginning of the project: the initial scope of work anticipated the space as 100% storage. As the core group contemplated housing and using the collections, both for Eastern State’s programming needs as well as for outside researchers, it became apparent that space should be allocated to house staff and accommodate researchers. Inasmuch as the Box Factory still had ample capacity to store both collections, the additional space provided for staff was a win-win for the project.

ESPHS publicized the NEH and IMLS collections storage planning projects in the October 2014 e-newsletter (see Appendix III). The monthly e-newsletter reached more than 15,300 subscribers who have expressed in interest learning more about developments and programs at the historic site. This newsletter piece coincided with an increased focus on the collections as ESPHS raised funds through its 2014 annual appeal to conserve its ten most endangered artifacts. ESPHS’ audience now has greater awareness of the collections and the historic site’s efforts to provide appropriate levels of care for them.

## **Accomplishments**

The project conducted a more detailed examination of the Box Factory's structure, original wall construction, and suitability for renovations and adaptive re-use. The consultants engaged ESPHS staff and Board Directors through a thoughtful process that built consensus for the design solutions. See Appendix I for photographs of the current preservation conditions of the Box Factory space.

This project succeeded in developing the proposed advanced schematic plans for a long-term collections storage solution. The facility described and illustrated in the final document addresses all of ESPHS' original goals. These include creating a facility that will 1) provide its two collections (Abandoned and New) with security from insects, mold, rodents, fire and theft, 2) give ESPHS the ability to separate items by material type (e.g. paper, wood, metal), and 3) give ESPHS the ability to provide appropriate temperature and humidity controls for the collections.

The *Collections Care Facility – Schematic Design* provides for increased collections storage capacity of 2.5 linear feet each year, so that the New Collection can continue to grow, while allowing ESPHS to simultaneously provide museum quality storage for the best examples of the Abandoned Collection.

It addresses the improvements to the storage environment, security, and capacity while also establishing sustainable systems that will present minimal operating costs. Increasing and improving on-site storage represents a convergence of sustainability and preservation, as the use of an existing building is one hallmark of sustainability. ESPHS hopes that rehabilitating this building for an appropriate purpose will set a precedent for future projects on site as well as for the field as a whole.

The “box within a box” design also addresses sustainability by maximizing environmental management for conservation while minimizing the energy consumption. By insulating the new structure from the penitentiary's stone walls and dividing the structure into three distinct areas — one for the New Collection (374 s.f.), one for the Abandoned Collection (893 s.f.) and one for Research/Collections Care (465 s.f.), ESPHS will be able to provide temperature and humidity control only to the extent truly needed. This will reduce operating costs. For example, heat or air conditioning in the Research/Collections Care Area can be completely shut off when unoccupied. Less energy is also required for the Abandoned Collection, which includes robust wooden and metal items, and has a broader range of acceptable temperature and relative humidity levels than the New Collection, which includes photographs, paper, and other sensitive items.

The *Collections Care Facility – Schematic Design* also provides much needed working space within the storage facility for the collections staff and gives research staff and visitors better access to the collections for research and exhibit planning. ESPHS' current space is too small and collections care constantly encroaches on others' workspaces, resulting in the potential for items to be co-mingled in ways that are inappropriate and potentially dangerous to the artifacts. Currently, access to the collection for interns and researchers is also limited due to inadequate physical space. The solutions in the storage facility design designate separate, dedicated spaces for each of these activities.

The design of the storage facility is consistent with ESPHS' philosophy of maintaining the site as a stabilized ruin and using spaces in ways that do not negatively impact, but rather positively impact, the visitor experience. For example, the design of the storage structure's eastern end deliberately preserves the pathway used by visitors to reach the Death Row Courtyard, an area where ESPHS is expanding its programming. It seizes the opportunity to positively impact the visitor experience by installing a glass wall at that end to give ESPHS an opportunity to display key artifacts in the Abandoned Collection Storage Area. Motion-activated LED lights will illuminate the display case when visitors pass by, providing maximum light protection, and minimum electricity use. All rooms within the new structure will have energy efficient LED light fixtures, which will remain off when rooms are unoccupied, minimizing object exposure to light.

In addition to door locks, the team considered additional ways to prevent theft of collections. They determined that the doors within the new structures will have large vision panels to allow the staff to see into storage areas from the Research/Collections Area, or vice versa, to monitor the collections. Also, the collections care and storage areas will be protected by a mist fire suppression system, a fire security feature not existing in the current storage areas. Archival-quality compacting storage equipment was selected for the New Collection, which is mostly paper, housed in regular-sized boxes. Fixed archival-quality shelving was selected for the Abandoned Collection, due to its greater variability in object size, shape, and weight.

The consultants followed the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings to minimize adverse impacts on the historic fabric. They also reviewed and updated the site infrastructure plans (the skylights and roof drainage), provided detailed quantification of the building repairs that will be needed as well as a cost estimate. In addition, they developed the performance criteria for the mechanical and electrical systems and made preliminary suggestions for equipment.

There was one change in documentation from the revised scope of work approved by the NEH. The final document has a single perspective drawing not the two originally anticipated. ESPHS State was satisfied with the primary perspective drawing and decided that a second drawing was not necessary at this time.

### **Grant Products**

The NEH grant yielded an advanced schematic design document (see Appendix II) that includes specific architectural plans, building sections, exterior and interior building elevations, furniture plans, and wall sections showing how the "box within a box" concept will be integrated into the historic building envelope. It also contains an updated specification narrative and a definitive professional cost estimate as well as a perspective drawing. This document serves two purposes. First, it functions as an internal management document to communicate the planning team's vision to ESPHS' full Board and management staff. The 16-member Board of Directors determines how the new capital project detailed by the schematic design fits with its strategic priorities and approves staff to move forward with fundraising. Second, ESPHS development staff and Board will use the document in their outreach to prospective funders. The detailed architectural plans, elevations, and the evocative perspective drawing convey how the new

storage space will function and help ESPHS provide its collections with a higher level of care and improve its accessibility for research.

### **Continuation of the Project**

Now that the plans and preliminary costs are determined, this project will become a part of the organization's strategic plan (under development in 2015 -2016), and fundraising will begin. The consultants contracted to design the new space will continue to be involved in future phases of construction and implementation.

### **Long-Term Impact**

The project will have an impact on a much larger audience in the future after ESPHS raises the funds and constructs the new storage and study facility. At present, ESPHS annually welcomes a handful of researchers ranging from high school, college and graduate level students to scholars who all delve into the collections for their papers, publications and exhibits. When the facility designed through this project is realized, ESPHS will be able to accommodate a larger volume of researchers. In addition, colleagues from other museums will be able to view artifacts and documents that have the potential to contribute to their exhibitions.

The visible storage aspect of the project will also give ESPHS' annual visitors (nearly 190,000 in 2014) a glimpse of the best examples selected from the vast Abandoned Collection for long-term preservation. Signage outside the storage enclosure will give visitors further insight into ESPHS' collections that otherwise are exhibited only once a year since ESPHS does not have a dedicated, secure, and climate controlled exhibit space.

This schematic design project also has the potential to inform future projects that members of the consultant team may conduct for other museum clients facing similar collections storage challenges and seeking innovative solutions.

### **Lessons Learned/Best Practices**

The sequential approach to this project was very beneficial. It began with the IMLS-funded effort to identify the prospective space best suited for collections storage within this large facility of abandoned spaces, and followed with the NEH-funded, more in-depth examination of the preferred candidate space. The choice of the "Box Factory" was an unanticipated outcome of the IMLS study. The more focused NEH study allowed a more detailed refinement of the schematic design for this space. The time needed to conduct the two studies also gave the ESPHS staff and the consulting team a chance to be more reflective and consider the details of the proposed project. This thoughtful process yielded many improvements in the schematic design versus the original concept.

### **Background on Collections Care at Eastern State Penitentiary**

Between 1971 when the Eastern State Penitentiary closed as an active prison and 1994 when the historic site opened for tours, neglect of the building and exposure to the elements took a severe toll on the structures and items left within. The penitentiary's physical state posed a serious threat to public safety and the fledgling tour program. In fact, the City required all visitors and staff on site to wear hard hats until 2003 and sign liability waivers until 2009. The newly formed

historic site was forced to focus on the building's enormous capital needs to provide a safe tour route as well as on creating public programming to attract an audience. These severe conditions meant that for many years collection management competed with site development and preservation for money and attention.

Despite the necessary focus on building structures in the early years of Eastern State Penitentiary Historic Site's (ESPHS) operation, board members, staff, and volunteers all knew the contributing value of the objects in totality with the building and the tour program. Early efforts were made to collect and tag furniture and unique objects and place them in two relatively dry spaces in Cellblock 2. However, many items remained where they were left in 1971, making it difficult to know the exact number of objects needing attention and impossible to make them available to researchers. The secured rooms in Cellblock 2, where the accessioned Abandoned Collection items are stored, were not ideal. Until 2013, it remained largely unprotected from water infiltration. It still has temperature fluctuations and is exposed to significant dust and dirt deposits from the damaged walls as well as light through the rooms' skylights.

Fundraising focused on stabilizing the 11 acres of structures was difficult until public interest grew. Unfortunately, the deterioration process continued. Finally, public funding, first from the City, followed by the Commonwealth of Pennsylvania, and ultimately two Save America's Treasure's grants, supported new roofing and preserved this National Historic Landmark. The Pew Charitable Trusts has also granted stabilization funds through its Heritage Philadelphia Program. As the Halloween fundraising event saw growth and success, its proceeds began supporting capital projects and public safety improvements. After 20 years, stabilization is nearly achieved. By the end of 2015, ESPHS will have protected 95% of the major roofs (including the current storage location for the Abandoned Collection and Cellblock 2) at a cost of over \$10 million.

ESPHS currently maintains two collections of historically significant items: the "New Collection" includes items donated to the organization, while the "Abandoned Collection" consists entirely of items left on the property following Eastern State Penitentiary's closing as an active prison in 1971. Both collections contain books, documents, publications, photographs, objects, and inmate art and crafts. These holdings impart a unique insight into life at the penitentiary: a microcosm of society rarely experienced by outsiders.

The New Collection is housed in two rooms in the Administrative Staff Offices. Once processed, artifacts are stored in appropriate containers on steel shelves in a room with HVAC, which is monitored for temperature and humidity. The room is locked with a combination that only three people know (the President and CEO, the Senior Vice President, Director of Interpretation and Public Programming, and the Manager, Archives and Records) and regularly inspected for pests. The Administrative Office is included in the Fire Detection and Alarm system. Although the Abandoned Collection is in more serious need of attention, there the need for improvement in the building that houses the New Collection and was also analyzed during this planning process. Monitoring equipment shows that, although temperature remains generally stable to ensure staff comfort, the humidity drops below 30 percent RH during winter, while frequently spiking above 65 percent RH in the summer. Approximately 374 s.f. is needed for the New Collection. It is only partially accessioned, although incoming items are numbered and filed on receipt.

The 23 years of neglect of the site have taken a severe toll on the Abandoned Collection. Continued exposure to the elements continues to damage them. Many items remained in situ when the building closed in 1971, making it difficult to know the exact number of objects needing attention, and impossible to make them available to researchers. Items that have been moved to the Cellblock 2 storage area have been tagged with identifying information, somewhat cleaned and placed on wooden shelves in cabinets without additional protective enclosures. This storage area is locked with a combination lock, which only the President, the Senior Vice President, the Manager, Archives and Records, and the three Tour Program Managers know. The room remains unprotected from temperature and humidity fluctuations and is exposed to significant dust and dirt deposits from the damaged walls as well as light through the room's skylight.



## Appendix I: Photographs of On-Site Preservation Conditions of the Box Factory, 2014



Aerial View of Cellblock 2 with Box Factory Circled, 2014



Interior View Facing West of Box Factory, 2014





Exterior View of Box Factory Northern Wall from Cellblock 15 (Death Row) Exercise Yard, 2014

# COLLECTIONS STORAGE

## Planning for museum-quality conditions



Eastern State Penitentiary's collection continues to grow through generous gifts and occasional purchases. This means, however, that **our current climate-controlled storage will soon reach its capacity**. At the same time, there are artifacts that we still need to move from crude storage on site into appropriate museum quality conditions.

Two recent federal grants are helping us lay the groundwork for a solution:

- \$26,000 from Institute of Museum and Library Services (IMLS) in 2013.
- \$40,000 from the National Endowment for the Humanities (NEH) in 2014.

The IMLS grant enabled us to engage a team of architects, collections conservators, and engineers to assess four potential locations for a climate controlled and expanded storage facility. After comparing the pros and cons of each building, the team chose the Box Factory, a former workshop space off Cellblock 2.

The NEH grant advanced the planning with the same experts. In September, we received detailed drawings and cost estimates for converting the raw workshop space into collections storage that will carry Eastern State forward for years to come.